

Division Newsletter

American Society for Engineering Education

DIVISION: Civil Engineering

EDITOR: Thomas Mulnazzi
The University of Kansas

DATE: November 1989

CHAIRMAN'S REMARKS

Planning is well underway for the 1990 ASEE Annual Meeting in Toronto. In addition to our regular technical sessions, tentative plans are being made for two workshops. The first is the Engineering Accreditation Workshop presented by ASCE. Dean Bill Wilhelm of Wichita State University presented a workshop in Lincoln this past June and it was very successful. We'd like to repeat it on an annual basis. This workshop is particularly useful for department heads and faculty who are involved in preparations for ABET evaluations. I personally found the workshop very valuable, and the handouts are very useful. The second "workshop" that we're trying to organize is an engineering look at either the CN Tower, the largest free-standing structure in the world, or the new Toronto Bluejays Stadium. I'm working with the Ontario Society of Professional Engineers in planning this workshop, which would take place on either Saturday, June 23, or Sunday, June 24, 1990. I hope that you'll be able to join us in Toronto. It's a beautiful city, and I think we'll have an excellent program.

The project to which I'll be devoting most of my time during the year that I am Chairman involves the journal of our Division, *Civil Engineering Education*. In order to increase the number of subscribers to this journal and to attract a greater number and variety of papers, we're looking into possibly combining the ASEE Civil Engineering Division journal with an existing ASCE journal. That we will combine the journals is far from a foregone conclusion. We're just looking at the feasibility of such a merger at this time.

One advantage of combining journals with ASCE is that membership in ASCE is about 100 times greater than that in the CE Division of ASEE. Because their journals have a wider audience, in this day of publish or perish it is understandable that young academics will contribute to ASCE journals before thinking of ASEE. This not only affects our journal but in fact affects ASEE membership because ASEE is not regarded as a "must" society to join. It's important that this perception be changed, and we all need to work on this. See you in Toronto!

Bill Highter
University of Massachusetts

ASEE - - INVOLVEMENT BY DESIGN

**by Ronald W. Eck, P.E.
West Virginia University**

When my term as editor of the *Civil Engineering Division Newsletter* expired in Spring 1988, I did not realize that I would be preparing material for it again so soon. However, when Tom approached me about doing a column on involvement in ASEE and the advantages to be derived therefrom, I was glad to oblige. I think Tom asked me to prepare this column because of my active involvement in several different areas of the Society.

One of the things that stands out about the first ASEE annual conference I ever attended was the meeting of the Teaching Methods Committee at the CE Division planning session. Although I was a new young faculty member, almost immediately I felt that my ideas were being accepted, and I was given the opportunity to organize a conference session. My involvement grew from there to include presentations at annual conferences, papers in the civil engineering education journal, serving as Campus Activity Coordinator (now referred to as Campus Representative) at my institution, serving on the executive board of my section, serving as committee chair, secretary-treasurer, program chair, and chairman of the CE Division, and serving on the Board of Directors as Chairman of PIC I and Vice President for Professional Interest Councils. I cite these only to illustrate the wide variety of avenues for involvement that exist in ASEE.

There is no question that ASEE has played a major role in my career and in my professional development; I have also had countless enjoyable and rewarding personal experiences. Obviously, not everyone has the interest or the ability (speaking in terms of resources) to become involved to such an extent. However, I am firmly convinced that there is something for everyone in ASEE. The way to find and take advantage of that is through active involvement in the Society.

Finding an entry point for involvement is not always easy, so we tend to continue as

members but do not always participate actively. I will outline an approach that an individual can use to assess how he or she might more actively participate in the Society for the ultimate benefit of both the individual and ASEE. This will not be an argument for membership in ASEE. I am assuming that the reader is a member of ASEE, but not necessarily an active one. However, I hope that the approach I outline will be used by those contemplating membership in ASEE. One other caveat deserves mention. While the CE Division wants and needs active participation of good people, we realize that there may be factors preventing or limiting that involvement. The message I hope to convey is "get involved," regardless of which block in the ASEE organizational chart that involvement falls.

If we agree that active participation in ASEE is a worthwhile goal and that the way to increase participation is the problem we need to solve, we can approach the matter much as we would any other engineering problem solving or design activity. Looking at things this way will help to point out reasons for actively participating and will indicate the best avenue(s) of participation for each individual's unique situation.

Defining the Problem

As our students know, the first step in the design process is probably the hardest. To define this problem, we need to state our personal and career goals and objectives. It's good to do this periodically anyway, regardless of whether you are contemplating ASEE participation. It is useful to compare your goals and objectives with those of your institution, agency or firm. It is my hope that ASEE participation will contribute to achieving both.

Generating Solutions

The next step is to generate solutions, such as ASEE activities that can be used to achieve the stated goals. These, of course, will differ, depending on where we stand in our careers at particular points in time and the types of institutions with which we are affiliated.

What are some typical faculty concerns that ASEE can help to address? For example, a new assistant professor may be concerned about obtaining external research funding and/or generating refereed publications. Or, given the pressures to acquire research funding and to publish, perhaps the assistant professor feels a personal need to learn about multiple facets of teaching and learning so that he or she can do a better job in the classroom. More experienced faculty members may be interested in sharing with others some new or different teaching approaches they have developed, or they may want to learn about how to incorporate better communications skills, design or computer activities into their classes. They may be interested in moving toward administrative positions or getting involved in the accreditation process. Administrators have somewhat different concerns, including the issues surrounding the faculty pool, the student pipeline, equipping laboratories and relations with industry.

Regardless of the particular problem or concern that a faculty member may have, I am convinced that ASEE can play a role in solving that problem. Think about how participating in ASEE could enhance your professional and personal development. This should be a brainstorming exercise, so don't be critical or judgmental of any ideas. Try to generate as many possible solutions as you can.

There are clearly more solutions that I can enumerate in a column such as this. However, I will try to highlight a couple of them. Publishing a paper through one of ASEE's refereed forums can be helpful when promotion and tenure time rolls around. Annual conferences typically have sessions on research funding and classroom issues specifically aimed at new faculty. While at the conference, attendance at committee meetings and social functions provides an opportunity to share ideas and concerns with peers and to get involved by writing a paper or organizing a session. One can acquire a responsible position (e.g., organizing a session or chairing a committee) more quickly in ASEE than in any professional society with which I am familiar. The national recognition that

results also helps build the case for promotion and tenure.

Identifying Constraints

After generating solutions, identify constraints that limit what can be done. In many cases, the constraints will serve as the criteria for evaluating the possible solutions. For example, due to limited travel funds, attending an ASEE annual conference may be out of the question. Due to teaching, research or administrative commitments, time may be a limitation.

Ranking Possible Solutions

Using whatever criteria have been identified, the next step is to evaluate and rank the possible solutions. The chosen solution should be examined closely to identify the important factors that must be considered when the detailed solution is developed. This list of factors may take the form of questions that must be answered by your department chairman, dean, ASEE staff or by members of particular ASEE divisions or sections.

The Action Plan

Finally, we put it all together by combining the factors identified and answering the questions asked in the analysis step and producing a detailed solution or action plan to be carried out by the individual. For example, suppose a more experienced faculty member expresses a desire to demonstrate leadership and organization skills. Although his department's travel budget precludes attendance at the annual conference, he or she can get involved at the section level and arrange sessions at annual section meetings or become involved with the section's executive board.

Similarly, individuals with a specific technical or curricular interest can find an outlet through the relevant division. There are many avenues of involvement here, including the opportunity to present papers at annual conferences, organizing sessions through one of the division committees, or sharing a new idea or approach with colleagues by writing a formal paper for

publication in Civil Engineering Education or in Engineering Education. Virtually all of us have tried new ideas or approaches in the classroom. We need to do a better job of sharing our successes (and sometimes our failures) with colleagues around the country.

For those interested in making an impact at the national level on accreditation, educational policy or some other issue important to our careers, ASEE offers a variety of opportunities. This level of involvement typically requires more time because one must develop a "track record." However, I have found that the rewards and satisfaction obtained here far exceed the time and effort involved. The key is to make a mark for yourself at the section and division levels first.

As with any design activity, there should be periodic evaluation of the solution implemented. On a regular basis, you should assess whether active participation in ASEE is helping you to attain the goals and objectives you had established and whether those goals still pertain. If the answer to the former is "no," then the source of the problem should be sought.

I have tried to outline an approach that individuals can use to design a program of more active involvement in ASEE. It is based on the premise, reinforced through my own years of involvement in ASEE, that active participation yields personal and professional benefits well in excess of the investment. In turn, the Society in particular and engineering education in general, benefit. Engineering education will be facing some serious issues in the future. Energy, knowledge and teamwork from a variety of professionals will be needed to come to grips with those issues.

Try the approach yourself! Find the avenue of involvement that best fits your circumstances and participate actively in ASEE. Give it a conscientious effort and after a year or so let us know the results of your evaluation. I'm willing to bet that the result will be mutually beneficial for both you and the Society. If not, please communicate that to us as well. To improve ASEE and engineering education in the future, we must learn from failures as well as successes. Good luck.

CALL FOR PAPERS

With a conference theme of "Engineering Education: Advancement of Technology Through Canada-U.S.-Global Interchange," the CE Division of ASEE is seeking papers for the 1990 annual conference. The conference is to be held in Toronto, Ontario, Canada June 24 through 28. Session topics of the four CE Division committees are:

"Should the Bachelor of Science Degree in Engineering be Accredited as a Professional Degree?"

The Education Policy Committee is seeking papers from educators and practitioners exploring the pros and cons of whether the B.S. degree in engineering, as determined by the minimum standards of the Accreditation Board of Engineering and Technology process, should be a professional degree.

"International Civil Engineering Practice"

The Professional Practice Committee is seeking papers that will address the impact of the trade agreement on civil engineering practice, the academic equivalency of degrees and the European Economic Community that is scheduled for implementation in 1992.

"What are Civil Engineering Faculty Doing in the Area of Innovative Teaching?"

The Teaching Methodology Committee is seeking papers that will address two subjects. The first is cooperative/team learning and integrated learning systems. The second is the approach to the integrated design experience, the team concept, practitioner involvement and course organization.

"Integrating Software in the Classroom"

The Computer Applications Committee is seeking papers on integrating software into the classroom. The main emphasis will be on methodology of presentation and incorporation into the course curriculum. Papers presented should highlight benefits and shortfalls, as well as student response.

Authors wishing to participate in one of these sessions should send completed

papers to M. Dean Parsons, CH2M Hill, 2300 N.W. Walnut Boulevard, Corvallis, OR 97330; telephone: (503) 752-4271, by November 27, 1989. Final papers will be peer reviewed for possible inclusion in the ASEE Proceedings.

"Electronic Mail/Communication"

An opportunity will be provided for people in civil engineering education to familiarize themselves with electronic mail networks and the ways one can utilize this method of communication.

For further information about this session, contact Dr. Robert M. Henry, Department of Civil Engineering, Kingsbury Hall, University of New Hampshire, Durham, NH 38234; telephone: (603) 862-1444.

Elections here again

It is time to vote for the CE Division's 1990-1991 officers. The ballot for voting is on the last page of this newsletter. Please cast your vote and return it as soon as possible, and no later than December 15, 1989. Short biographies of the candidates follow.

Chair Candidate M. Dean Parsons

M. Dean Parsons is recruiting/staffing manager for CH2M Hill in Corvallis, Oregon. He has been extremely active in professional societies, especially the National Society of Professional Engineers, of which he is a National Director. His activities within ASEE include being a director of the Civil Engineering Division and an associate editor for Civil Engineering Education. Dean belongs to ten technical societies and is a registered professional engineer in five states.

Vice Chair Candidate Edward S. Reitz

Edward S. Reitz is an associate professor of civil engineering at City College in New York. He has been a member of ASCE since 1955; a member of ASEE since 1965; ASEE Campus Representative

since 1973; chairman of Committee No. 2, CE Division; Middle-Atlantic Section Chairman 1985-1988, and a member of the CE Division Board, 1987 to date. Dr. Reitz has presented papers at ASEE Annual Conferences and at the ASCE Education Conference held at the University of Wisconsin, Madison. He is a registered professional engineer and active in P.E. review courses, ASCE student chapter activities, Tau Beta Pi, and student retention efforts on the City College campus.

Director Candidates William E. Kelly

William E. Kelly is professor and chairman of civil engineering at the University of Nebraska-Lincoln. Previously, he was professor and chairman of civil and environmental engineering at the University of Rhode Island. He earned all of his degrees, including the Ph.D., in 1972 from the University of Notre Dame. He is a member of ASEE, ASCE and Chi Epsilon and is a registered professional engineer in Nebraska and Rhode Island. He is an ABET program evaluator for the ASCE and is on the editorial advisory board for the Journal of Hydrology.

Walter LeFevre

Walter LeFevre is a professor of civil engineering at the University of Arkansas in Fayetteville. He has taught at Texas A&M, Texas Tech and Oklahoma State universities and has been at the University of Arkansas for 23 years. Dr. LeFevre serves as a member of the Accreditation Board for Engineering and Technology (ABET) and is on the Task Force on Fundamentals of Engineering Exam Review. He has served as vice president of the Southwest Region of the National Society of Professional Engineers and as chairman of Professional Engineers in Education. He has served as president and national director of the Arkansas Society of Professional Engineers and was named Arkansas's Engineer of the Year in 1980. He is NSPE 1989-1990 president.

**ASEE Civil Engineering Division
Standing Committees**

Standing Committees shall normally conduct the Annual Conference Session under the coordination of the Program Chairman and Executive Board, and shall act on matters of national interest within their purview and report to the Division at its annual business meeting. The Chairman of each committee shall be appointed by the incoming Division Chairman after consultation with the Committee.

**Committee on Educational Policy
Chairman: Ronald W. Eck**

The Committee on Educational Policy shall be concerned with undergraduate and graduate curricula development and accreditation; continuing education; recruitment and retention of students; faculty recruitment and development; and all other matters relating to educational policy within the general scope of civil engineering.

**Committee on Professional Practice
Chairman: Alan Prasuhn**

The Committee on Professional Practice shall establish liaison with professional/technical societies and practicing engineers as a means of identifying the entry and post graduate educational needs of students; developing programs to improve the interaction of educators and practitioners; and improving cooperation between the Division and other professional/technical societies.

**Committee on Teaching Methodology
Chairman: William E. Kelly**

The Committee on Teaching Methodology shall promote innovation in the development and improved teaching methods and organize programs and discussions on teaching methods. They shall give particular attention to teaching design and experimental concepts.

**Committee on Computer Applications
Chairman: Bob Henry**

The Committee on Computer Applications has as a focus the promotion and dissemination of computer utilization and its integration in civil engineering education. Additionally, the committee will function as a vehicle for facilitating the demonstration and sharing of computer instructional software.

The George K. Wadlin Distinguished Service award

was presented to

Glen L. Martin, CH2M Hill

By his friends and co-workers in the Civil Engineering Division
American Society for Engineering Education in June, 1989.

Panel and Poster Session Report

by Robert M. Henry

On June 28, 1989, approximately 27 people attended a panel discussion and poster session dealing with computer applications in engineering. Four people (Ken Buttry, Pete Hoadley, James Martin and Gerald Seeley) served on a panel that answered questions from the audience. The discussion centered on use of software in the curriculum and the classroom. We also received a demonstration on certain kinds of software created for civil engineering, especially in hydrology, soils and structures.

ASEE Ballot--CE Division

Officers for 1990-1991

Place an "X" in the appropriate

CHAIR:

M. Dean Parsons

_____ (write in)

VICE CHAIR:

Edward S. Reitz

_____ (write in)

DIRECTOR:

William E. Kelly
Walter LaFevre

_____ (write in)

Return ballot by Dec. 15, 1989, to:

Tom Mulinazzi
4010 Learned Hall
The University of Kansas
Lawrence, KS 66045-2210

ASEE-CE Div. NEWSLETTER
School of Engineering
The University of Kansas
4010 Learned Hall
Lawrence, KS 66045-2210